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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,701	12/26/2001	Koji Matsuo	KOJIM-443	7507

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EXAMINER	
HOFFMANN, JOHN M	

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/025,701	MATSUO ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 10-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 10-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-19 are newly added – but there is no indication as to why applicant thinks they define over the prior art. Thus, examiner cannot tell what Applicant intends the meaning to be.

From **37 CFR § 1.111:**

> The reply must present
> arguments pointing out the specific distinctions believed to render the claims,
> including any newly presented claims, patentable over any applied references.

Claims 16-19 require that the claims comprise step d) - but the claims already have a step d) which already require "heating to 1500 C" and "vitrifiying the porous silica matrix". Thus it is unclear if the claims whether claims 16-19 require an additional step d) , whether they further limit step d) or if they replace step d).

Claim Objections

Claims 16-19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 16-19 don't seem to further limit, rather they seem to broaden the claims. Most notably claims 18-19 appear to replace step d) so that it no longer requires sintering at a specific temperature – thus the scope is broadened.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara 6587262 (alone or in view of Hiraiwa 6189339) and in view of Kyoto 5053068 (and optionally in view of Moore WO 00/48046.

See how Fujiwara and Hiraiwa were previously applied. Official Notice was taken and not adequately traversed by applicant, therefore such is considered to be admitted prior art.

From **MPEP 2144.03:**

> If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate.

Claim 1 has been amended to require heating to a temperature between 1500 and 1700 (or at least such is deemed to be the broadest reasonable interpretation of

"to1500 to 1700") in the fluorine atmosphere. Fujiwara (as Applicant points out) has doping with fluorine, then heating to the required sintering temperature (col. 16, line 10).

Kyoto teaches that sintering a VAD preform in the fluorine atmosphere results in uniform distribution of fluorine and a high addition rate (col. 2 lines 10-19). Figure 3 of Kyoto shows how much the doping changes with temperature. Fukiwara uses VAD – col. 8, line 44 and elsewhere. It would have been obvious to sinter the Fukiwara preform in the fluorine atmosphere so as maximize the amount of fluorine in the glass and/or to reduce the time needed to dope the preform. Alternatively, it would have been obvious to just leave the Fukiwara gas in contact with the glass, because Fukiwara does not teach what gases (if any) are to be in contact with the gas, and to save time and money by not having to remove, purge and replace with other gases.

Moore is optionally cited to show it is known to do such sort of doping during sinter with glass that is to be used in photolithographic applications – page 10, lines 6-15 and example 2.

As to claims 16-17: Fukiwara heats to 1600, it is inherent that it is first heated to 1500 C before it achieves 1600 C. Claims are comprising in nature and are open to further heating. It does not seem proper to interpret "heating to 1500 C" to mean "heating to 1500 C and no further".

From MPEP 2111.01

(Ordinary, simple English
words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. Thus, "heating the resulting batter-coated dough to a temperature in the range of about 400oF to 850oF" required heating the dough, rather than the air inside an oven, to the

specified temperature.)

Alternatively, it would have been obvious to preform routine experimentation to determine the optimal sintering temperature.

Claims 18 and 19 are clearly met.

Claims 1-2 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraiwa 6189339 in view of Fujiwara 6587262 and Kyoto 5053068 (and optionally in view of Moore WO 00/48046.

See how the references were previously applied. It would have been obvious to sinter the Fukiwara preform in the fluorine atmosphere so as maximize the amount of fluorine in the glass and/or to reduce the time needed to dope the preform as taught by Kyoto (see above). Alternatively, it would have been obvious to just leave the Fukiwara gas in contact with the glass, because Fukiwara does not teach what gases (if any) are to be in contact with the gas, and to save time and money by not having to remove, purge and replace with other gases.

Moore is optionally cited to show it is known to do such sort of doping during sinter with glass that is to be used in photolithographic applications – page 10, lines 6-15 and example 2.

Claims 1-2 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraiwa 6189339 in view of Fujiwara 6587262, Yamagata 5325230 and Kyoto 5053068 (and optionally in view of Moore WO 00/48046.

See how the first three references were previously applied. It would have been obvious to sinter the Fukiwara preform in the fluorine atmosphere so as maximize the amount of fluorine in the glass and/or to reduce the time needed to dope the preform as taught by Kyoto (see above). Alternatively, it would have been obvious to just leave the Fukiwara gas in contact with the glass, because Fukiwara does not teach what gases (if any) are to be in contact with the gas, and to save time and money by not having to remove, purge and replace with other gases.

Moore is optionally cited to show it is known to do such sort of doping during sinter with glass that is to be used in photolithographic applications – page 10, lines 6-15 and example 2.

Response to Arguments

Applicant's arguments filed 28 July 2005 have been fully considered but they are not persuasive. See the new grounds of rejection that shows the well-known advantages to sinter in fluorine atmosphere.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8-17-05

John Hoffmann
Primary Examiner
Art Unit 1731

jmh